

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	) Confirmation No.: 2677
Hisato Shinohara et al.	) Examiner: Marianne L. Padgett
Serial No. 08/169,127	) Group Art Unit: 1715
Filed: December 20, 1993	)
For: LASER IRRADIATION METHOD	)

**APPELLANT'S REQUEST FOR REHEARING UNDER 37 CFR § 41.52**

Mail Stop Appeal Brief - Patents  
Honorable Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

The Decision on Appeal of the Board of Patent Appeals and Interferences (the Board) mailed July 29, 2010, has been received and its contents carefully noted. This Request for Rehearing is filed within two months of the original Board decision and therefore is believed to be timely under 37 CFR § 41.52(a)(1). In addition, this Request for Rehearing includes no new arguments or evidence and maintains the arguments of its Appeal Brief. To the extent that the Board's Decision on Appeal relies on interpretations of U.S. Patent No. 6,261,856 to Shinohara not previously set forth during prosecution of this application or in the Examiner's Answer, the Appellant addresses the Board's interpretation of Shinohara '856 in detail herein. Accordingly, the Applicant respectfully submits that this Request for Rehearing is proper under 37 CFR § 41.52(a) and requests rehearing for the reasons detailed below.

It is respectfully submitted that in affirming the rejection of claims 61-80, 91-94, 101, 104-107, 131 and 140-175 under the doctrine of obviousness-type double patenting over claims 1-30 of Shinohara '856, the Board improperly relied on the specification of Shinohara '856 to import limitations into the claims. One troubling

consequence of the Board's analysis, is that the claims of Shinohara '856 are interpreted in a manner that would contradict the Board's own decision with respect to the rejections under 35 U.S.C. § 112 and, in any event, would violate well established tenets of patent law.

In order to form an obviousness-type double patenting rejection, a claim in the present application must define an invention that is merely an obvious variation of an invention claimed in the prior art patent. The specification and drawings of the patent principally underlying the double patenting rejection may not be considered as prior art. General Foods Corp. v. Studiengesellschaft Kohle mbH, 972 F.2d 1272, 1279 (Fed. Cir. 1992). Claim terms are to be given their ordinary and customary meaning unless the inventor rebuts such presumption and expressly redefines such terms "with reasonable clarity, deliberateness, and precision." In re Paulsen, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994); see also, Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc), Sunrace Roots Enter. Co. v. SRAM Corp., 336 F.3d 1298, 1302 (Fed. Cir. 2003) and Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc., 334 F.3d 1294 (Fed. Cir. 2003) ("In the absence of an express intent to impart a novel meaning to the claim terms, the words are presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art."). As noted in In re Vogel, 422 F.2d 438, 441 (CCPA 1970), however, "[o]ccasionally the disclosure will serve as a dictionary for terms appearing in the claims, and in such instances the disclosure may be used in interpreting the coverage of the claim." However, the specification may be used to define claim terms only when the specification was intended to provide a clear lexicographic definition. E-Pass Techs., Inc. v. 3Com Corp., 343 F.3d 1364, 1369 (Fed. Cir. 2003). Furthermore, in determining whether a statement by a patentee was intended to be lexicographic, it is important to determine whether the statement was designed to define the claim term or to describe a preferred embodiment. Id. at 1369.

In its Decision on Appeal, the Board draws on various Figures and related embodiments of the disclosure of Shinohara '856, purportedly as a dictionary "to learn

the meaning of terms in a claim.” The Board relies on In re Vogel to support the assertion that “[i]n an obviousness-type double patenting determination the patent’s disclosure, in certain instances, ‘may be used as a dictionary to learn the meaning of terms in a claim.’” However, the Board fails to consider extensive precedent that set forth in what “certain instances” reference to the specification is appropriate and, in any event, fails to use the specification in the present application as a “dictionary” and rather uses it to import, wholesale, detailed features of the preferred embodiment into the claims. In context, In re Vogel states “[a]s pointed out above, in certain instances [the disclosure] may be used as a dictionary to learn the meaning of terms in a claim.” Vogel at 441 (emphasis added). The above section referred to states: “[i]n determining the meaning of a word in a claim, the specification may be examined. It must be borne in mind, however, especially in non-chemical cases, that the words in a claim are generally not limited in their meaning by what is shown in the disclosure. Occasionally the disclosure will serve as a dictionary for terms appearing in the claims, and in such instances the disclosure may be used in interpreting the coverage of the claim.” Id. (emphasis added). Thus, the Vogel court is clearly cautionary about the appropriate use of the specification in interpreting the claims.

First and most importantly, the court in Vogel opines that such use is to be “occasional,” thus implying that it is an unusual circumstance that justifies reference to the specification. However, the Board has not set forth any such circumstance in the subject application and instead appears to have simply ignored this threshold inquiry. To the contrary, the Decision is completely silent as to why the claim terms of the present invention are not entitled to their ordinary, plain meaning and why the usual presumption in this respect was rebutted. Apparently as a first resort and contrary to the presumption articulated by the Federal Circuit, for example, in Brookhill-Wilk 1, the Board consulted various figures and detailed embodiments within the specification for the meaning of the claim terms. That is, the Board, without explanation, relied on the particular embodiments described in the specification to define the meaning of every

claim limitation addressed by the Board with respect to the double patenting rejection. For example, the meaning of "forming a plurality of thin film transistors" was already well known in the art at the time of the invention, as demonstrated by considerable industry and art directed to this endeavor. This is evidenced, for example, in U.S. Patent No. 7,416,907 to Yamazaki, already of record in this appeal, which describes in detail a process of forming a plurality of thin film transistors without requiring a step of removing a silicon oxide layer.

Furthermore, the Vogel court only appears to sanction reference to the specification to determine the meaning of "words." In Vogel, the court was focused on the meaning of "pork," "beef," and "meat," all of which are individual words easily capable of discrete definition. In stark contrast, the Board in the present application seeks to rely on the specification to subscribe some meaning to the entire limitation of, for example, "forming a plurality of thin film transistors using the crystallized semiconductor film as at least channel regions of the thin films transistors." Such application is well beyond the bounds apparently sanctioned by a fair reading of the holding in Vogel. The Vogel court is also careful to warn that "[i]t must be borne in mind, however, especially in non-chemical cases, that the words in a claim are generally not limited in their meaning by what is shown in the disclosure." The subject claims are not directed to chemical subject matter and thus, according to Vogel, should "generally not be limited in their meaning by what is shown in the disclosure."

In any event, the Appellant respectfully submits that the Board's reliance on the specification goes well beyond any permissible use thereof and instead the specification is used as a prior art disclosure, contrary to the standard set forth in Vogel and in subsequent case law established at the Federal Circuit. See, for example, General Foods Corp. at 1279. Specifically, claims 61, 71 and 151 of the present invention recite "removing an insulating layer comprising silicon oxide from an upper surface of the crystallized semiconductor layer" in addition to "forming a plurality of thin film transistors using the crystallized semiconductor layer as at least channel regions of the thin film

transistors for the active matrix circuit and said driving circuit.” The Board held that although not explicitly recited in the claims of Shinohara ‘856, the removing step would have been obvious in view of the recitation in claim 1 of Shinohara ‘856 of a step of “forming a plurality of thin film transistors using the crystallized semiconductor film as at least channel regions of the thin film transistors.” The Board’s decision relies extensively on the specification and not merely “as a dictionary to learn the meaning of terms in a claim.” That is, in spite of well established case law to the contrary, the Board’s decision imports additional claim limitations from the specification. For example, the Board states that:

“Shinohara’s Specification indicates that “forming a plurality of thin film transistors means removing a silicon oxide layer (59) from a plurality of crystallized semiconductor islands [(58)], forming a gate insulating layer (53), forming a gate electrode (56) on the gate insulating layer (53) over each island [(58)], and doping each island [(58)] using the gate electrode (56) as a mask so as to form source and drain regions (57) in each semiconductor island (58) (col. 6, ll. 11-23; Fig. 7D).”

However, the disclosure of column 6, lines 11-23 of Shinohara ‘856 (the ‘dictionary’ relied on in the decision) is unmistakably a description of an embodiment and not a “clear lexicographic definition.” See, E-Pass Techs. at 1369. More specifically, as noted at column 6, lines 38-49, the invention of Shinohara ‘856 “is not limited to the particular examples described.” In any event, the disclosure at column 6, lines 11-23 does not define forming a plurality of thin film transistors as meaning “removing a silicon oxide layer (59)” but instead states, in part, that “[after] crystallization, **insulator 59** is etched off” (emphasis added). Insulator 59 is described elsewhere in the specification as “made of silicon oxide **or** silicon nitride” (column 5, lines 44-46) (emphasis added). Therefore, beyond the impropriety of relying on what is clearly a description of an embodiment, the Board’s alleged “dictionary” definition appears to be based on specific exemplary materials described therein, to the exclusion of further explicitly disclosed alternatives. That is, the Board has articulated a rigid definition that is not objective, either by the standards of the disclosure itself or

according to what is within the knowledge of one of ordinary skill in the art. The Appellant respectfully submits that the Board's analysis evidences a clear misapprehension of Shinohara '856 and that the Board goes well beyond any permissible use of the specification thereof.

Furthermore, the Board's interpretation produces a logical contradiction, in that it would render the decision as a whole internally inconsistent. In effect, the Board has held that a single claimed step "A" (the *forming* step) in Shinohara '856 corresponds to two distinctly claimed and definite steps "A plus B" (the *forming* step plus the *removing* step) of claims 61, 71 and 151 of the present invention. This is clearly erroneous. If the claims of Shinohara '856, read in view of the specification, include the removing step within the forming step, then the same should be true of the present invention, as the forming step claimed herein is recited substantially identically to the claimed forming step of Shinohara '856, and is supported identically in the disclosure. Accordingly, the Board's decision infers that the additional recitation of the removing step in the present claims must be superfluous. To the contrary, however, the Board rightfully held that this very same feature in the present claims ("removing a silicon oxide layer") is definite, such that the removing step must be interpreted separate and distinct from the forming step. To interpret the claims otherwise would render them ambiguous. Accordingly, the Board's construction that the forming step of Shinohara '856 implies the removing step is internally contradictory and improper on its face.

Claims 140, 153 and 164 recite "forming a gate insulating film on said plurality of semiconductor islands wherein said gate insulating film covers a surface of the ion blocking film, said surface being exposed between the plurality of semiconductor islands." The Board held that this was obviousness-type double patenting in view of the recitation in claim 27 of Shinohara '856 of "forming a plurality of semiconductor islands on a blocking film" and "forming a gate insulating film on said plurality of semiconductor islands." The Board relied on Figure 7C of Shinohara '856 "which shows that between the semiconductor islands (58, Fig. 7B) the ion blocking film (51, Fig. 7A) is covered by

the gate insulating film (53)." Again, the Board improperly relies on an embodiment disclosed in the specification for the additional limitations that a surface of the blocking film is exposed between the plurality of semiconductor islands and that the gate insulating film covers said surface. The Appellant respectfully submits that the specification of Shinohara '856 omits any clear, deliberate and precise indication that the additional feature of exposing a surface of the blocking film between the plurality of semiconductor islands was intended to redefine any of the words recited in the phrases "forming a plurality of semiconductor islands on a blocking film" or "forming a gate insulating film on said plurality of semiconductor islands." See, Paulsen at 1480.

Furthermore, claims 140, 153 and 164 additionally recite "forming a plurality of semiconductor islands ... over the ion blocking film, each of said semiconductor islands comprising crystallized silicon." Therefore, a logical inconsistency similar to the one noted above is repeated. That is, the Board effectively holds that the meaning of the steps in Shinohara '856 of "forming a plurality of semiconductor islands" and "forming a gate insulating film" surpasses the meaning of the very same steps of claims 140, 153 and 164 of the present invention, and includes an additional limitation that the gate insulating film covers a surface of the ion blocking film, said surface being exposed between the plurality of semiconductor islands. However, to reach this conclusion the Board disregards several well established principles of claim construction, mentioned above. Therefore, this logical error, like the above fallacy, appears to be a direct result of the Board's improper reliance on a portion of the specification that clearly describes an embodiment and evidences a clear misapprehension in the Board's analysis.

Claims 71, 76, 164 and 165 recite "forming a plurality of thin film transistors using the crystallized semiconductor layer as at least channel regions of the thin film transistors for the active matrix circuit and said peripheral circuit." The Board held that this was obviousness-type double patenting in view of the recitation in claim 1 of Shinohara '856 of "forming a plurality of thin film transistors using the crystallized semiconductor layer as at least channel regions of the thin film transistors, whereby

both of said active matrix circuit and said driving circuit are constituted with said thin film transistors." The Board again relies on Shinohara's Figure 7C and the disclosure at column 5, lines 55-58, that "[it] is also possible to form other semiconductor islands on the same substrate in order to form a driver circuit or peripheral circuit for driving the pixel TFTs" to interpret the claim as suggesting a peripheral circuit. Again, the Board's decision improperly imports this claim limitation from the specification's description of an embodiment, not a "clear lexicographic definition." In any event, the Appellant respectfully submits that one of ordinary skill in the art, upon review of the present specification, including the above-referenced portions, would readily understand the meaning of "a peripheral circuit" as being, for example, a circuit for driving pixel TFTs that is peripheral to the pixel TFTs. In other words, one of ordinary skill in the art at the time of the present invention understands that a peripheral circuit is not just a driver circuit, but it is a circuit that is located in a peripheral area of the device, *i.e.*, outside the display or pixel area of a device. This meaning is self-evident by use of the word "peripheral" in the claim term itself. There is no corresponding limitation recited in the claims of Shinohara '856.

Furthermore, the holding is more egregious because the Board states that the specification is "suggestive" of a peripheral circuit. However, the specification is not prior art, and relying on the specification for a *suggestion* to modify the claims of Shinohara '856 is wholly outside of any permissible use of the specification in an obviousness-type double patenting rejection. General Foods Corp. at 1279.

Claims 141 and 154 recite "wherein the condensed laser beam has a second cross section on the substrate wherein a length of said second cross section along said first direction is longer than that of said second cross section along said second direction and a width of said second cross section along said second direction is smaller than that of said first cross section." The Board held that this was obviousness-type double patenting in view of the recitation in claim 1 of Shinohara '856 of "expanding said first pulsed excimer laser beam only in a first direction; condensing the expanded pulsed

excimer laser beam only in a second direction perpendicular to said first direction..." The Board relied on Figures 2A-2D to reach this conclusion. As above, these figures are descriptive of a specific embodiment, and do not provide a "clear lexicographic definition" of any claim term. For that matter, it's not clear what specific claim term of Shinohara '856 the Board was attempting to define by searching the specification.

Accordingly, it is respectfully submitted that the Board's decision improperly relies on the specification of Shinohara '856 as a prior art disclosure beyond any permissible use as a "dictionary" and results in claim constructions that are unreasonable, misapprehend the disclosure of Shinohara '856 and well established doctrines of claim interpretation.

For the foregoing reasons, reconsideration and withdrawal of the obviousness-type double patenting rejections are in order and respectfully requested. Should the Board or the Examiner believe that anything further would be desirable to place this application in better condition for allowance or appeal, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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